AMSAT News Service Weekly Bulletins
Issue: ANS-008
Date: 2023-01-08
Sources: amsat-ans-2023-ans-008-weekly-hyperkitty-f649fb7cb6.txt

---

AMSAT NEWS SERVICE
ANS-008

In this edition:

* Story of SuryaSat-1 (SS-1) Nano Satellite
* VUCC Satellite Standings as of January 1, 2023
* ARISS News
* Upcoming Satellite Operations
* Hamfests, Conventions, Maker Faires, and Other Events
* Satellite Shorts From All Over

The AMSAT News Service bulletins are a free, weekly news and information service of AMSAT, The Radio Amateur Satellite Corporation. ANS publishes news related to Amateur Radio in Space including reports on the activities of a worldwide group of Amateur Radio operators who share an active interest in designing, building, launching and communicating through analog and digital Amateur Radio satellites.

The news feed on http://www.amsat.org publishes news of Amateur Radio in Space as soon as our volunteers can post it.

Please send any amateur satellite news or reports to: ans-editor [at] amsat.org

You can sign up for free e-mail delivery of the AMSAT News Service Bulletins via the ANS List; to join this list see: https://mailman.amsat.org/postorius/lists/ans.amsat.org/

ANS-002 AMSAT News Service Weekly Bulletins

To: All RADIO AMATEURS
From: Radio Amateur Satellite Corporation
712 H Street NE, Suite 1653
Washington, DC 20002

DATE 2023 Jan 08

Story of SuryaSat-1 (SS-1) Nano Satellite

This afternoon 6 January 2023, at 07:50 UTC, there will be the culmination of the long journey of Surya Satellite (SS-1) Nano Satellite project that started in 2016 after a presentation of amateur radio activities by ORARI (the Indonesian Radio Amateurs Organization) to students of University of Surya.

In early 2015 ORARI made a presentation to University of Surya Robotic Club, and one of the amateur radio activities that got their interest was high-altitude ballooning due to the telemetry aspect, such as sending temperature, altitude, voltage, as it relates to their robotic interest. I showed them a couple pictures of my past activity in ARHAB as the faculty advisor of amateur radio society at Texas Tech University in early 2000. This started the high-altitude balloon planning, including designing the balloon payload (APRS utilizing OpenTracker mini board).

Late 2015, with the successful launch and activation of LAPAN-A2/ORARI (which becomes IO-86) satellite, the students grew interest of building a satellite as it is only a couple of kilometers higher they said. So in 2016

the ORARI team visit them and shared the experience in designing a satellite, as I myself was part of the ORARI team that involved in the design of the amateur payload in the LAPAN-A2/ORARI. As this would be their first effort in building a satellite from scratch, they said we will start with APRS then next satellite would be a voice repeater satellite. They submitted the design in a competition by UNOOSA and won.

The student got more excited after seeing the POC (proof of concept) worked and they continue with building the prototype, conducted various tests with LAPAN (the aeronautical and space organization) and complying with the necessary paperwork/approvals. But the road wasn't easy as they got funding problem (at one time they were selling T-Shirt to raise funding), change in faculty advisor and university leadership and their own graduation and transition into the professional world (some of them got employed in commercial satellite companies). Finally they got back in the last 2 years to finalize the payload, had the payload verification with ORARI team and shipped the payload to Japan (JAXA), integrated with other payload and shipped to the US, then lifted up on Space-X CRS-26 rocket to ISS last November and now today is the deployment date from the Kibo Module of ISS.

Apologize for the long posting but I got really excited today as the deployment of SS-1 Nano Satellite is coming up shortly.

Update: SS-1 has been deployed at 08:03 UTC on 6 January 2023 please monitor APRS beacon at 145.825 MHz

[ANS thanks Yono Adisoemarta, YD0NXX / N5SNN, ORARI HQ, Head of Satellite Division, for the above information]

+=+=+=

```
7L1ETP                New      133
W6AER                 100      126
DU9JJY                New      116
VE1CWJ/VP9            New      110
WD9EWK (DM13)         New      109
WY7FD                 New      102
JS2GGD                New      101
W3TI                  New      101
```

Congratulations to the new VUCC holders.

WY7FD is first VUCC Satellite holder from DN74
VE1CWJ/VP9 is first VUCC Satellite holder from Bermuda and FM72
DU9JJY is first VUCC Satellite holder from Philippines and PJ27
IK6GZM is first VUCC Satellite holder from JN62
7L1ETP is first VUCC Satellite holder from PM95

HAPPY NEW YEAR

May you all be blessed with new grid squares in 2023.

[ANS thanks Jon Goering, N7AZ, for the above information]

+=+=+=

The following satellite has decayed from orbit and has been removed from this week's AMSAT-NA TLE distribution as follows:

TW-1A NORAD Cat ID 40928. (decayed from orbit on 12/29/22 per Space-Track).

Finally, AMSAT is pleased to announce the new daily two line element bulletin available at https://www.amsat.org/tle/current/daily-bulletin.txt. Members of the Sci-Tech Radio Society (STARS) have worked with AMSAT Information Technology to automate this process. Seventeen year old STARS member Ryan "RJ" Fitzgerald, N1BGA, enjoyed exercising skills he learned in his high school computer science class. "It was cool to do something for the real world beyond just homework assignments, plus it forced me to learn stuff not covered in class" said Fitzgerald.

STARS is part of New England Sci-Tech - a non-profit STEM education center and makerspace dedicated to project-based, hands-on learning for youth and families across the New England community with a strong Amateur Radio focus. Visit www.nescitech.org for details. Thanks to Joe Fitzgerald, KM1P, for this update on this new innovative approach to AMSAT TLE distribution.

[ANS thanks Ray Hoad, WA5QGD, AMSAT Orbital Elements Manager, for the above information]

ARISS News

Amateurs and others around the world may listen in on contacts between amateurs operating in schools and allowing students to interact with astronauts and cosmonauts aboard the International Space Station. The downlink frequency on which to listen is 145.800 MHz worldwide.

No upcoming contacts currently scheduled

Special thanks to our ARISS telebridge ground stations. Approximately 38% of the ARISS school contacts are handled by the ARISS telebridge stations. Thanks to following stations: AB1OC, IK1SLD, K6DUE, NA7V, ON4ISS, VK4ISS, VK4KHZ, VK5ZAI, VK6MJ, and ZS6JON.

The crossband repeater continues to be active. If any crewmember is so inclined, all they have to do is pick up the microphone, raise the volume up, and talk on the crossband repeater. So give a listen, you just never know.

Comments on making general contacts

I have been seeing a lot of traffic on Facebook and I suspect on other social media sites with people asking why they are not hearing the crew make general contacts. First off the crew is very busy on the ISS and they simply may not have the time to just pick up the microphone and talk. Also, one needs to be aware of their normal daily schedule. I have listed below the constraints that we at ARISS have to follow in order to schedule the school contacts. Hopefully this will help you better schedule your opportunities.

Typical daily schedule

Wakeup to Workday start= 1.5 hours
Workday start to Workday end=12 hours
Workday end to Sleep= 2 hours
Sleep to wakeup= 8.5 hours

The crew's usual waking period is 0730 - 1930 UTC. The most common times to

find a crew member making casual periods are about one hour after waking and before sleeping, when they have personal time. They're usually free most of the weekend, as well.

SSTV events are not that often. So please check out https://www.ariss.org/ for the latest information or watch for the ARISS announcements.

And don’t forget that the packet system is active.

As always, if there is an EVA, a docking, or an undocking; the ARISS radios are turned off as part of the safety protocol.

ARISS Radio Status

Columbus Module radios:
IORS (Kenwood D710GA) – STATUS - Configured. Default mode is for cross band repeater (145.990 MHz up {PL 67} & 437.800 MHz down).
* Powering off for US EVA on January 20. OFF Jan 19 about 17:00 UTC. ON Jan 21 about 12:30 UTC.
*Capable of supporting USOS scheduled voice contacts, packet and voice repeater ops.

Service Module radios:
IORS (Kenwood D710GA) – STATUS - Configured. Default mode is fo packet operations (145.825 MHz up & down)
*Powering off for US EVA on January 20. OFF Jan 19 about 17:00 UTC. ON Jan 21 about 12:30 UTC.
*Capable of supporting ROS scheduled voice contacts, packet, SSTV and voice repeater ops.

The latest information on the operation mode can be found at https://www.ariss.org/current-status-of-iss-stations.html

The latest list of frequencies in use can be found at https://www.ariss.org/contact-the-iss.html

[ANS thanks Charlie Sufana, AJ9N, one of the ARISS operation team mentors for the above information]

Upcoming Satellite Operations

Chris VE3FU / VO2AC / VO1FUA / VE2FUA: The weekend of January 27-29 @Dave_VE3KG and I will be competing in the CQ160 CW Contest as VO2AC from the Point Amour Lighthouse in Labrador (Zone 2). We'll also be on the other HF bands starting January 24 as VO2AC and VO2AAA. Please work us in the contest! We also plan on operating the linear and FM satellites from grid GO11 as VO2AC and VO2AAA from January 24-27.

[ANS thanks Paul Overn, KE0PBR, AMSAT rover page manager, for the above information]

Hamfests, Conventions, Maker Faires, and Other Events

AMSAT Ambassadors provide presentations, demonstrate communicating through amateur satellites, and host information tables at club meetings, hamfests, conventions, maker faires, and other events.

AMSAT Ambassador Clint Bradford K6LCS has a few satellite presentations scheduled:

-Greenville, North Carolina (1/10/23)
-Ontario, Canada (1/16/23)
-Thames Valley, England (5/11/23)

AMSAT will also have a presence at HamCation 2023 in Orlando on February 10-12, 2023. Details on HamCation can be found at https://www.hamcation.com/

[ANS thanks Paul Overn, KE0PBR, AMSAT Events page manager, for the above information]

Satellite Shorts From All Over

+ SpaceFlight Now is reporting the successful launch on Jan. 3 of the SpaceX Transporter 6 at https://spaceflightnow.com/2023/01/03/falcon-9-transporter-6-live-coverage/. This launch carried 114 satellites to orbit. The article says "The Transporter 6 launch also placed into orbit... an amateur radio CubeSat from the Czech Republic." I assume that is a reference to BDSAT-2, which is supposed to carry a AX.25 GFSK G3RUH 9600 baud digipeater with downlink at 436.025, according to http://www.amsatuk.me.uk/iaru/finished_detail.php?serialnum=866 This is confirmed by https://www.bdsat.cz/ That website shows "VHF Downlink frequency: 145.850 MHz," but the IARU says the VHF frequency is an uplink. (Thanks to Mark Johns, K0JM, SpaceFlight Now, and the IARU)

+ The TJREVERB are seeking a couple of stations skilled in communicating with satellites using APRS. The Thomas Jefferson High School for Science and Technology's TJREVERB satellite was deployed from the ISS on Dec 29th, and the team is still trying to successfully make contact with it. Please contact Curt Laumann, K7ZOO, if you're interested in assisting. His email address can be found on QRZ.com

+ Congratulations to Hector Martinez, W5CBF, who finished his Satellite Worked All Zones (WAZ) award through QSOs using IO-117's MEO digipeater. Only about 16 CQ zones are workable on LEO satellites from his QTH in Louisiana, so the MEO digipeater was able to fill in the rest. His award is the 42nd Satellite WAZ issued. Satellite WAZ requires confirmed QSOs with 25 of 40 CQ zones and is sponsored by CQ Magazine. Confirmations through LoTW are accepted.

+ Want to try something different? FO-118 carries a linear transponder with a 70cm downlink and a 15 meter uplink. The 15 meter uplink is very sensitive. This week's editor made a couple of QSOs using 5 watts from his FT-817ND to an AlexLoop Walkham Portable Magnetic Loop and was able to access the transponder with strong signals through the pass.

+ UVSQ-SAT will mark 2 years in space on January 24, 2023. In celebration of this milestone, the FM transponder will be activated. The uplink is 145.905 MHz and the downlink is 437.020 MHz. No PL tone is required. (Thanks to the UVSQ-SAT team)

Join AMSAT today at https://launch.amsat.org/

In addition to regular membership, AMSAT offers membership to:

* Societies (a recognized group, clubs or organization).
* Primary and secondary school students are eligible for membership at one-half the standard yearly rate.
* Post-secondary school students enrolled in at least half time status shall be eligible for the student rate for a maximum of 6 post-secondary

years in this status.
* Memberships are available for annual and lifetime terms.

Contact info [at] amsat.org for additional membership information.

73 and remember to help Keep Amateur Radio in Space!

This week's ANS Editor,

Paul Stoetzer, N8HM
n8hm [at] amsat.org